

- a) the inter-monomer interface;
- b) domain D1;
- c) domain D2;
- d) the conserved WSXWS box (SEQ ID NO:30); and
- e) the N-terminal helix.

21. The EPOR analog protein according to claim 20 comprising at least one amino acid substitution from said inter-monomer interface, said substitutions comprising amino acid residues at positions 155, 175 and 178. *of what?*

22. The EPOR analog protein according to claim 20 comprising at least one amino acid substitution from said inter-monomer interface, said substitutions comprising amino acid residues at positions 133 and 135. *of what?*

23. The EPOR analog protein according to claim 20 comprising at least one amino acid substitution from said domain D1, said substitutions comprising amino acid residues at positions 40, 53, 55, 57, 69, 79, 81, 85, 96, 98, 100, and 109. *?*

24. The EPOR analog protein according to claim 23 wherein said substitutions are selected from the group of substitutions consisting of W40F, W40Y, Y53F, F55I, Y57F, L69I, V79I, L96F, V100L, and Y109F.

25. The EPOR analog protein according to claim 20 comprising at least one amino acid substitution from said domain D2, said substitutions comprising amino acid residues at positions 120, 121, 127, 129, 138, 140, 142, 156, 158, 160, 174, 183, 192, 194, 196, 198, 207, and 218.

26. The EPOR analog protein according to claim 25 wherein said substitutions are selected from the group of substitutions consisting of L127I, A129V, V138I, L140I, Y156F, Y156W, V158L, V158I, V160I, I174L, Y192I, Y192F, F194I, F194V, F194L, G207W, G207I, G207M, F208I, F208Y, F208E, L218F, and L218I.

27. The EPOR analog protein according to claim 20 comprising at least one amino acid substitution from said WSXWS box (SEQ ID NO:30), said substitutions comprising amino acid residues at positions 209, 210, 211, 212, and 213.

28. The EPOR analog protein according to claim 27 wherein said substitution is A211Y.

29. The EPOR analog protein according to claim 20 comprising at least one amino acid substitution from said N-terminal helix region, said substitutions comprising amino acid residues at positions 11, 15, 17, 18, 19, 29, 37, and 39.

30. The EPOR analog protein according to claim 29 wherein said substitutions are selected from the group of substitutions consisting of K11L, K11W, K11Y, K11A, K11Q, A15L, A15Y, A15M, A15S, A15R, L17F, L17Y, L17I, L17W, L17M, L17K,

L18Y, L18N, A19W, A19V, A19Y, A19D, F29L, F29Y, F29R, C37I, C37L, C37E, C37Q, and C37E.

31. The EPOR analog protein according to claim 20 comprising at least one amino acid substitution from said domain D1 and said domain D2, said substitutions comprising amino acid residues at positions 40, 53, 55, 57, 69, 79, 81, 85, 96, 98, 100, 109, 127, 129, 138, 140, 142, 156, 158, 160, 174, 183, 192, 194, 196, 198, 207, and 218.

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32. The EPOR analog protein according to claim 31 wherein said substitutions are selected from the group of substitutions consisting of W40F, W40Y, Y53F, F55I, Y57F, L69I, V79I, L96F, V100L, Y109F, L127I, A129V, V138I, L140I, Y156F, Y156W, V158L, V158I, V160I, I174L, Y192I, Y192F, F194I, F194V, F194L, G207W, G207I, G207M, F208I, F208Y, F208E, L218F, and L218I.

33. The EPOR analog protein according to claim 32 wherein the protein comprises SEQ ID NO: 6.

34. The EPOR analog protein according to claim 31 further comprising a linker.

35. The EPOR analog protein according to claim 34 further comprising a dimerization motif.